DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
Budget Bureau No. 04-R060.1

FOR FAA USE ONLY
OFFICE IDENTIFICATION

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE: [illegible]	MODEL: [illegible]-150
	SERIAL NO.: 22-[illegible]	NATIONALITY AND REGISTRATION MARK: [illegible]
2. OWNER	NAME (As shown on registration certificate): [illegible]	ADDRESS (As shown on registration certificate): [illegible] 33803

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE: REPAIR	5. TYPE: ALTERATION
AIRFRAME	••••••••••••••• (As described in item 1 above) •••••••••••••••				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
	X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER	[illegible]I 218[illegible]698

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

DATE	SIGNATURE OF AUTHORIZED INDIVIDUAL
1-12-79	David K. Barr[illegible]

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is X APPROVED REJECTED

BY:
- FAA FLT STANDARDS INSPECTOR
- FAA DESIGNEE
- MANUFACTURER
- REPAIR STATION
- X INSPECTION AUTHORIZATION
- CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT
- OTHER (Specify)

DATE OF APPROVAL OR REJECTION	CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL
1-12-79	AI2184898	David K. Barr[illegible]

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. **DESCRIPTION OF WORK ACCOMPLISHED** *(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)*

REMOVED ORIGINAL PITOT TUBE AND REPLACED WITH A DASCO HEATED PITOT TUBE, KIT# 2022-12-STC-SA-2142-W.E. ALSO INSTALLED AN ALTITUDE DIGITIZER, TRANS-CAL INDUSTRIES, MODEL D120-P2-T, SERIAL NUMBER 22776.

AIRCRAFT	1182.9	62.59	74037.7
REMOVE OLD PITOT	.3	81.	24.3
INSTALL HEATED PITOT	1.2	81.	97.2
CIRCUIT BREAKER, MOUNT	.7	60.	42.0
DIGITIZER	1.0	50.	50.0
	1185.5		74202.6

NEW AIRCRAFT EMPTY WEIGHT: 1185.5 LBS
NEW AIRCRAFT C.G.: 62.6 INCHES
NEW USEFUL LOAD: 814.5 LBS

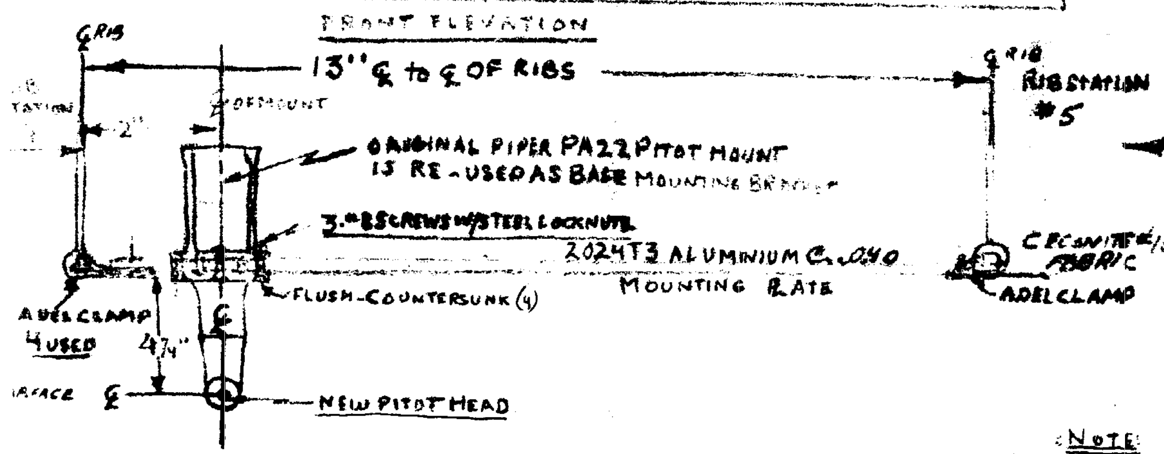
INSTALLATIONS WERE PERFORMED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND DRAWINGS AND FAR 43-13-1 & 2, SYSTEMS OPS CHECKS O.K. See Drawing attached.

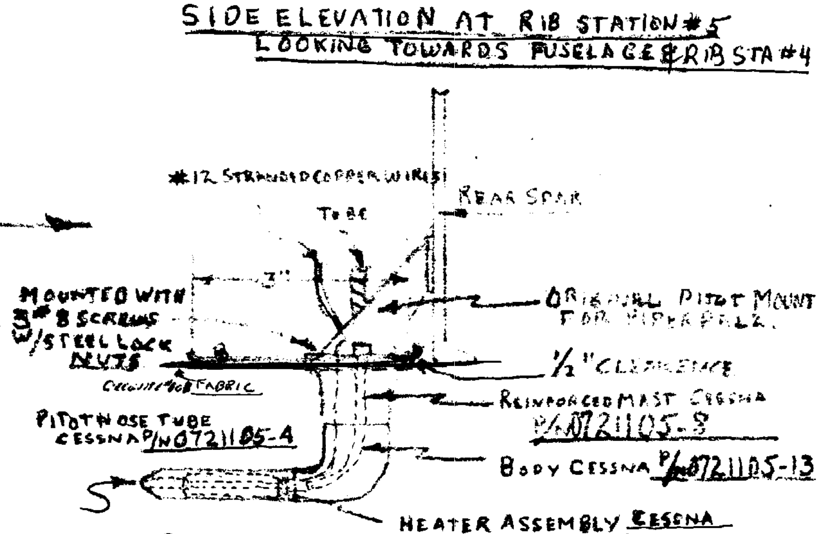
**********DRAWING FOLLOWS**********

☒ ADDITIONAL SHEETS ARE ATTACHED

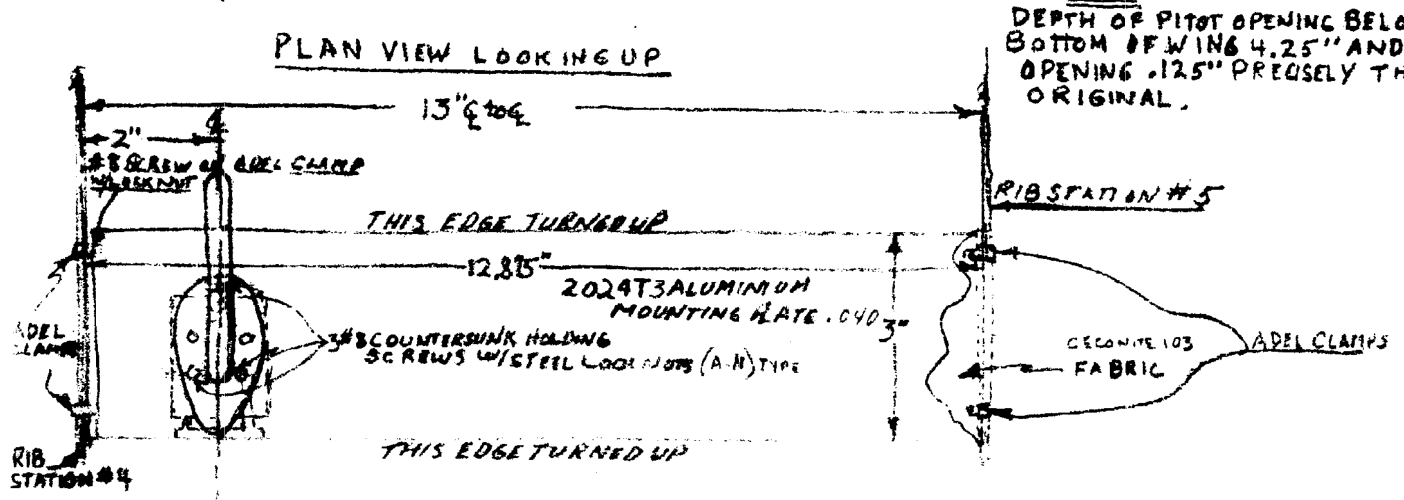
PIPER-PA22 HEATED PITOT INSTALLATION

WEIGHT & BALANCE DATA	WT	ARM
PITOT HEAD ASSEMBLY WITH DASCO MOUNTING MAST FOR PA22	1.2 lb.	81
DEDUCT REMOVAL OF ORIGINAL PITOT HEAD & CONNECTIONS	.3 lb.	81
NET INCREASE IN WEIGHT	.9 lb.	81
WIRING, CIRCUIT BREAKER AND MOUNTING W/LITE	.7 lb	60
TOTAL INSTALLATION	1.6 lb.	71.8



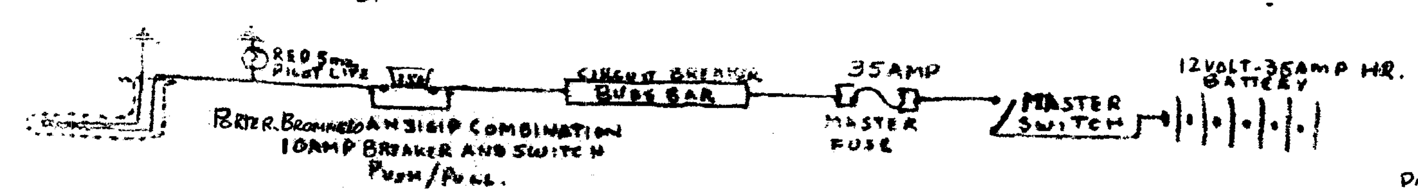


NOTE: DEPTH OF PITOT OPENING BELOW BOTTOM OF WING 4.25" AND PITOT OPENING .125" PRECISELY THE SAME AS ORIGINAL.



NOTE: THIS HEATED PITOT INSTALLATION USING DASCO PITOT ASSEMBLY PER KIT # 2022-12 STC # SA2142.WE FOR PIPER PA22/PA28

WIRING & ELECTRICAL DATA



DRAWN BY [illegible] 11/74

(FOR TRIPACER N-8499D)

DESCRIPTION OF INSTALLATION

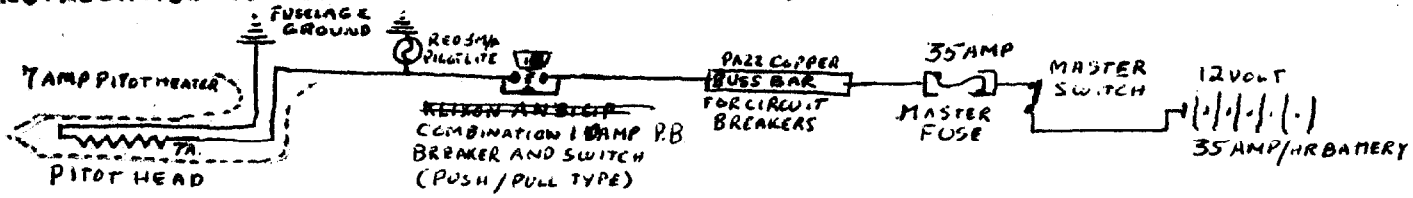
An aluminium plate made up of 2024T3 with a thickness of .040 inches was made up 12.875" long X 3" wide with the leading and trailing edges of the 12.875" length turned up, so as not to form a shear plane or cutting edge to the fabri This was fastened inside the wing at the lower edge against the fabric between rib stations #4 and rib station #5 with ¼" ADEL clamps.

The original Piper pitot tube was removed along with the Flexable lead in tube and the heated pitot assembly consisting of Cessna heated pitot assembly P/N0721105-2, 0721105-4; 0721105-6; 0721105-7; 0721105-13 was used and fitted to reinforced mast P/N0721105-8 which was trimmed in length precisely to allow the center line of the heated pitot tube to extend below the lower edge of the wing 4¼". This is the distance the original pitot assembly extended below the wing lower edge. The inlet orface is precisely the same diameter as original .125". The assembly was then bolted to the reinforced plate, then to the original Piper PA22 pitot mount that is fastened to the rear spar. A flexable hose fitting with AN thread is fitted from the pitot assembly to the pitot line in the wing. 2 stranded #12 wires are connected (A+ and ground) which lead through the wing to fuselage ground and through a ~~KLIXON 15amp P/N AN-3161P~~ P-B 10 Amp breaker and on/off switch. A 13 volt 5ma red pilot lamp is in parallel with the circuit to illuminate when the breaker is in the "on" position. The circuit is then tied into the main buss bar which is in turn fused through the master switch circuit.

TEST: After installation, the entire system was tested. During a 10 minute ground test with the pitot heat on, the temperature at the tube of the pitot assembly was measured at 250° F. while the mast at the attach point where the fabric mounted as less than 3° F. raise above ambient temperature. This was done while ambient temperature was 600 F. The air speed indicator was checked for calibration and flight tested. The indicated air speed was the same as original and there was NO difference noted in air speed when heat was applied.

:WEIGHT AND BALANCE DATA OF THE INSTALLATION ON PA22:

	WEIGHT	ARM	MOMENT
Pitot Head assembly with mounting mast on PA22	1.2 lbs.	81	97.2
Less Removal of original Pitot head & Connections	.3 lbs	81	24.3
Net difference in head assembly	.9 lbs.	81	72.9
ADD WIRING, CIRCUIT BREAKER & PANEL MOUNTING	.7 lbs.	60	42.0
INSTALLATION TOTALS →	1.6 lbs.	71.8	114.9



ELECTRICAL LOAD 7 AMP CONTINUOUS OPERATION